

Amendment**Amendment to Claims**

Claim 1 (Amended): A method of transmitting data through a mesh of data switches, the method comprising:

receiving a data frame at a first port of a ~~first~~ receiving data switch, the data frame originating at a first MAC device and having a destination address associated with a second MAC device, the second MAC device being associated with a destination data switch in the mesh;

maintaining a data structure associating each of a plurality of destination addresses of discovered MAC devices with one of a port and an aggregation of ports on the receiving data switch;

comparing the destination address of the received data frame with the data structure to determine a match with one of a port and aggregation of ports;

transmitting the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined;

~~associating the destination address with one of a single port and an aggregation of ports of the first data switch, each port in the aggregation of ports providing a data path through the mesh of data switches to the destination data switch; and~~

~~selecting a~~ ^{one of the ports} port in the aggregation of ports for transmitting the received data frame to the destination data switch if the destination address is associated with an the aggregation of ports.

Claim 2 (original): The method of claim 1, the method further comprising:
associating the destination address with the destination data switch; and
determining the associated port or aggregation of ports based upon the
destination data switch.

Claim 3 (original): The method of claim 1, the method further comprising
selecting a port in the aggregation of ports for transmitting the data frame based upon
one of the destination address and a source address of the data frame associated with
the first MAC device.

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Claim 4 (Cancelled).

Claim 5 (Amended): The method of claim 4 1, the method further comprising:
receiving a message at the receiving data switch specifying a destination data
switch associated with the destination address of the second data frame;
associating in the data structure the destination address of the second data frame
with a transmitting port on the receiving data switch; and
suspending a transition for transmission of subsequent data frames to the third
MAC device through a data path including the transmitting port to ensure a delay from a
transmission of a last data frame according to the spanning tree protocol to a
transmission of a first data frame through the data path.

*last
subsequent
frame*

Claim 6 (Amended): ~~The A~~ method of ~~claim 4~~ transmitting data through a mesh of data switches, the method further comprising:

receiving a data frame at a first port of a receiving data switch, the data frame originating at a first MAC device and having a destination address associated with a second MAC device and a source address associated with the first MAC device, the second MAC device being associated with a destination data switch in the mesh;

maintaining a data structure associating each of a plurality of discovered MAC device addresses with a destination data switch in the mesh;

~~receiving a second data frame originating at a third MAC device on a receiving port of the first data switch, the second data frame having a source address associated with the third MAC device;~~

comparing the source address of the ~~second~~ received data frame with the data structure to determine a match with a destination data switch; and

if no match is determined, transmitting a message to at least one other data switch in the mesh specifying the first receiving data switch as a destination data switch of the ~~third~~ first MAC device.

discovered
or second?

Claim 7 (Amended): A source data switch for transmitting data frames through a mesh of data switches, the source data switch comprising:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to a mesh of data switches with one of a port and an aggregation of ports of the switching fabric, each port in the aggregation of

ports coupling to a data path through the mesh of switches to a MAC device having the destination address; and

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports;

logic to select ^{one of the ports} ~~a port~~ from among an aggregation of ports for transmitting ^{the} ~~a~~ data frame received at the switching fabric if a the destination address of received data frame ~~is associated with~~ is matched with the aggregation of ports; and

logic to transmit the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

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Claim 8 (original): The source data switch of claim 7, the source data switch further comprising:

logic to associate the destination address of the received data frame with a destination data switch; and

logic to select ^{one of the ports} ~~a port~~ from the aggregation of ports based upon the destination data switch for transmission of the received data frame.

Claim 9 (original): The source data switch of claim 7, the source data switch further comprising logic to select ^{one of the ports} ~~a port~~ in the aggregation of ports for transmission of the received data frame based upon one of ^{the} ~~a~~ destination address and ^{the} ~~a~~ source address of the received data frame.

Claim 10 (Cancelled).

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Claim 11 (Amended): The source data switch of claim 10 7, the source data switch further comprising:

logic to receive a message specifying a destination data switch associated with the destination address of the received data frame;

logic to associate in the data structure the destination address of the received data frame with a transmitting port of the switching fabric based upon the destination data switch; and

logic to suspend a transition for transmission of subsequent data frames to the destination address through a data path including the transmitting port to ensure a delay from a transmission of a last data frame according to the spanning tree protocol to a transmission of a first data frame through the data path.

Claim 12 (Amended): ~~The A~~ source data switch ~~of claim 7~~, the source data switch further comprising:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to a mesh of data switches with one of a port and an aggregation of ports of the switching fabric, each port in the aggregation of ports coupling to a data path through the mesh of switches to a MAC device having the destination address;

logic to compare the source address of the a received data frame with the data structure to determine a match with a destination data switch; and

logic to initiate transmission of a message to at least one data switch in the mesh specifying a data switch hosting the switching fabric as a destination data switch for data frames having a destination address corresponding with the source address of the received data frame if no match is determined.

Claim 13 (Amended): A data switch controller comprising:

an interface adapted for coupling to a switching fabric, the switching fabric including a plurality of ports;

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logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to a mesh of data switches with one of a port and an aggregation of ports of the switching fabric, each port in the aggregation of ports coupling to a data path through the mesh of switches to a MAC device having the destination address; and

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports;

one of the ports
logic to select ~~a port~~ ^{one of the ports} from among an aggregation of ports for transmitting a data frame received at the switching fabric if a the destination address of the received data frame ~~is associated with~~ is matched with the aggregation of ports; and

logic to transmit the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

Claim 14 (original): The data switch controller of claim 13, the data switch controller further comprising:

logic to associate the destination address of the received data frame with a destination data switch; and
logic to select ^{switch of the ports} a port from the aggregation of ports based upon the destination data switch for transmission of the received data frame.

Claim 15 (original): The data switch controller of claim 13, the data switch controller further comprising logic to select ^{switch on of the ports} a port in the aggregation of ports for transmission of the received data frame based upon one of a destination address and a source address of the received data frame.

Claim 16 (Cancelled).

Claim 17 (Amended): The data switch controller of claim ~~46~~ 13, the data switch controller further comprising:

logic to receive a message specifying a destination data switch associated with the destination address of the received data frame;

logic to associate in the data structure the destination address of the received data frame with a transmitting port of the switching fabric based upon the destination data switch; and

logic to suspend a transition for transmission of subsequent data frames to the destination address through a data path including the transmitting port to ensure a delay

from a transmission of a last data frame according to the spanning tree protocol to a transmission of a first data frame through the data path.

Claim 18 (Amended): The A data switch controller of ~~claim 13~~, the data switch controller further comprising:

logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to a mesh of data switches with one of a port and an aggregation of ports of a switching fabric, each port in the aggregation of ports coupling to a data path through the mesh of switches to a MAC device having the destination address;

logic to compare the source address of the a received data frame with the data structure to determine a match with a destination data switch; and

logic to initiate transmission of a message to at least one data switch in the mesh specifying a data switch hosting the switching fabric as a destination data switch for data frames having a destination address corresponding with the source address of the received data frame if no match is determined.

Claim 19 (Amended): A data network for transmitting data frames from a source MAC device to a destination MAC device, the data network comprising:

a destination data switch coupled to a destination MAC device;

a mesh of data switches coupled to the destination data switch for transmitting data frames originating at a source MAC device to the destination MAC device; and

a source data switch coupled to the source MAC device including:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to a the mesh of data switches with one of a port and an aggregation of ports of the switching fabric, each port in the aggregation of ports coupling to a data path through the mesh of switches to a MAC device having the destination address; and

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports;

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logic to select a port from among an aggregation of ports for transmitting a data frame received at the switching fabric if a the destination address of received data frame ~~is associated with~~ is matched with the aggregation of ports; and

logic to transmit the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

Claim 20 (original): The data network of claim 19, wherein the source data switch further comprises:

logic to associate the destination address of the received data frame with a destination data switch; and

logic to select a port from the aggregation of ports based upon the destination data switch for transmission of the received data frame.

Claim 21 (original): The data network of claim 19, wherein the source data switch further comprises logic to select a port in the aggregation of ports for

transmission of the received data frame based upon one of a destination address and a source address of the received data frame.

Claim 22 (Amended): The data network of claim 7 19, the source data switch further comprising:

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports; and

logic to initiation transmission of the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

Claim 23 (original): The data network of claim 22, wherein the source data switch further comprises:

logic to receive a message specifying a destination data switch associated with the destination address of the received data frame;

logic to associate in the data structure the destination address of the received data frame with a transmitting port of the switching fabric based upon the destination data switch; and

logic to suspend a transition for transmission of subsequent data frames to the destination address through a data path including the transmitting port to ensure a delay from a transmission of a last data frame according to the spanning tree protocol to a transmission of a first data frame through the data path.

Claim 24 (Amended): ~~The A data network of claim 19, wherein the source data switch further comprises~~ the data network comprising:

a destination data switch coupled to a destination MAC device;

a mesh of data switches coupled to the destination data switch for transmitting data frames originating at a source MAC device to the destination MAC device; and

a source data switch coupled to the source MAC device including:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to the mesh of data switches with one of a port and an aggregation of ports of the switching fabric, each port in the aggregation of ports coupling to a data path through the mesh of switches to a MAC device having the destination address;

logic to compare the source address of the a received data frame with the data structure to determine a match with a destination data switch; and

logic to initiate transmission of a message to at least one data switch in the mesh of data switches specifying a data switch hosting the switching fabric as a destination data switch for data frames having a destination address corresponding with the source address of the received data frame.

Claim 25 (Amended): An article comprising:

a storage medium comprising machine-readable instructions stored thereon for:

maintaining a data structure associating each of a plurality of destination addresses of discovered MAC devices with one of a port and an aggregation of ports of a receiving data switch;

detecting receipt of a data frame at a first port of a switching fabric, the switching fabric having a plurality of ports, the data frame having a destination address associated with a destination MAC device coupled to the switching fabric through a mesh of data switches at a destination data switch;

comparing the destination address of the received data frame with the data structure to determine a match with one of a port and aggregation of ports;

transmitting the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined;

~~associating the destination address with one of a single port and an aggregation of ports of the switching, each port in the aggregation of ports providing a data path through the mesh of data switches to the destination data switch; and~~

selecting a port in the aggregation of ports for transmitting the data frame to the destination data switch if the destination address is associated matched with ~~an~~ the aggregation of ports.

Claim 26 (original): The article of claim 25, wherein the storage medium further comprises machine-readable instructions stored thereon for:

associating the destination address of the received data frame with a destination data switch; and

selecting a port from the aggregation of ports based upon the destination data switch for transmission of the received data frame.

Claim 27 (original): The article of claim 25, wherein the storage medium further comprises machine-readable instructions stored thereon for selecting a port in the aggregation of ports for transmission of the received data frame based upon one of a destination address and a source address of the received data frame.

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Claim 28 (amended): The article of claim 25, wherein the storage medium further comprises machine-readable instructions stored thereon for:

associating the destination address of the received data frame with ~~with~~ a port or aggregation of ports to determine a match; and

initiating transmission of the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

Claim 29 (original): The article of claim 28, wherein the storage medium further comprises machine-readable instructions stored thereon for:

receiving a message specifying a destination data switch associated with the destination address of the received data frame;

associating in a data structure the destination address of the received data frame with a transmitting port of the switching fabric based upon the destination data switch; and

suspending a transition for transmission of subsequent data frames to the destination address through a data path including the transmitting port to ensure a delay from a transmission of a last data frame according to the spanning tree protocol to a transmission of a first data frame through the data path.

Claim 30 (Amended): ~~The article of claim 25, wherein the~~ An article comprising:
a storage medium further comprises comprising machine-readable instructions stored thereon for:

maintaining a data structure associating each of a plurality of discovered MAC device addresses with a destination data switch in a mesh of data switches;

comparing the source address of a data frame originating at a MAC device and received at a receiving data switch with the data structure to determine a match with a destination data switch; and

if no match is determined, transmitting a message to at least one other data switch in the mesh specifying the receiving data switch as the destination data switch of the MAC device

~~associating the source address of the received data frame with a destination data switch to determine a match; and~~

~~initiating transmission of a message to at least one data switch in the mesh specifying a data switch hosting the switching fabric as a destination data switch for~~

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~~data frames having a destination address corresponding with the source address of the~~
~~received data frame.~~
